SONY

3-753-169-22(3)

FM Stereo/FM-AM Receiver

Operating Instructions

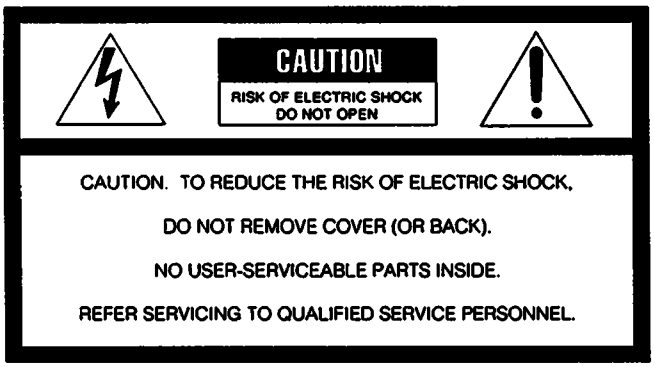
STR-GX67ES
STR-GX57ES

© 1991 by Sony Corporation

Warning

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION. TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol in intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to CATV system installer
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Owner's Record
The model number is located on the rear exterior and serial number is on the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No._____ Serial No._____

For the customers in Canada

CAUTION :
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

This instruction manual covers the STR-GX67ES, and STR-GX57ES.
The following functions are equipped only with the STR-GX67ES:
* FRONT PRE OUT/POWER IN jacks
* CONTROL S AUDIO IN/OUT jacks
* CENTER SPEAKER terminals

The illustrations used in the manual are mainly the STR-GX67ES.

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Quick reference ..... Back cover

Features

The STR-GX67ES or STR-GX57ES is a receiver which controls audio and video sources. The unit allows you to switch easily among a variety of audio/video programs.

Amplifier

- Optical Legato Linear A System allows the receiver to operate automatically as a class A amplifier when the level is low and as a class B amplifier when the level is high without disturbing the sound signal. This minimizes total harmonic distortion at every sound stage.
- These receivers have a spontaneous twin drive power circuit. Condensers having large capacity are used independently for the voltage amplification drive stage of class A and power output stage of class B. Thus, a stable output and high quality sound are obtained, resulting in exclusion of power interferences.
  The class A stage realizes a stable operation free from interference of the power stage even when an instantaneous or strong output is received.
- A source direct switch is employed to reproduce high fidelity sound.
  Any source can be reproduced without passing through the circuits of tone control and surround decoder.

Tuner

- Precise tuning is obtained thanks to the quartz-locked digital synthesizer system.
- A total of 30 FM/AM stations can be preset in 3 memory pages (A, B and C) that allow you to classify stations.

Surround sound system

- This unit incorporates all of 3 types of surround effect.
  - DOLBY SURROUND PRO LOGIC :The Dolby Pro Logic Surround Decoder has the same functions for playback as movie theaters and gives a theater-like experience in your listening room, naturally reproducing the audio sound field.
  - Hall Surround-provides reverberation effect that is produced in a large concert hall.
  - Simulated Surround-gives the feeling of width and thickness to monaural sound of old movie program, etc.
- The INPUT BALANCE control is employed to adjust the input balance of Dolby surround program sources.

Remote commander

- The remote commander allows you to control most of Sony's audio equipment from a distance.
- The programmable remote commander supplied with the STR-GX67ES is also equipped with an infrared ray transmitter/receiver which allows it to "read" and "store" control information from other remote commanders including non-Sony commanders.

Precautions

On safety

- Operate the unit only on 120 V AC, 60 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

On operation

- Before making program source connections, be sure to turn the power switch off and unplug the unit.
- When the unit is not used, turn the power off, to conserve energy and to extend the useful life of your unit.

On cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine.

For the customers in the U.S.A.

For detailed safety precautions, see the "IMPORTANT SAFEGUARDS" leaflet.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792, and 3,959,590. Canadian numbers 1,004,603 and 1,037,877. "DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Installing

Notes on Installation

To prevent internal heat buildup in the unit,
place the unit in a location with adequate air circulation.

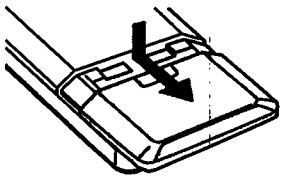
Do not install the unit:
— near heat sources such as radiators or air ducts.
— in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

Do not place anything on top of the cabinet.
The top ventilation holes must be unobstructed for the proper operation of the unit and to prolong the life of its components.

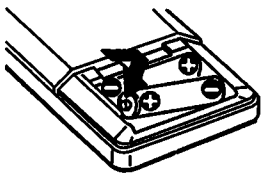
Installing Batteries

Before operating remote commander, install the batteries as shown.

1



2 Two size AA (R6) batteries



Do not throw away the carton and packing material!
It will be an ideal container when transporting the system for repair work, etc.

To avoid damage caused by battery leakage and corrosion
When the commander will not be used for a long time, remove the batteries.
Normal operation can be expected about a half year using Sony SUM-3 (NS), and a year using Sony AM-3 (NW) alkaline batteries.
When the batteries are run down, the remote commander will not operate the unit. In this case, replace batteries with new ones.

Changing the AM tuning interval
The AM tuning interval is preset to 10 kHz. To use the receiver where the frequency allocation system is based on a 9 kHz interval, make the following adjustments.

1 Turn on the power and tune in any AM station.
2 Turn off the power.
3 Press POWER while pressing the "+" PRESET TUNING button.

To reset the AM tuning interval, repeat the above steps.

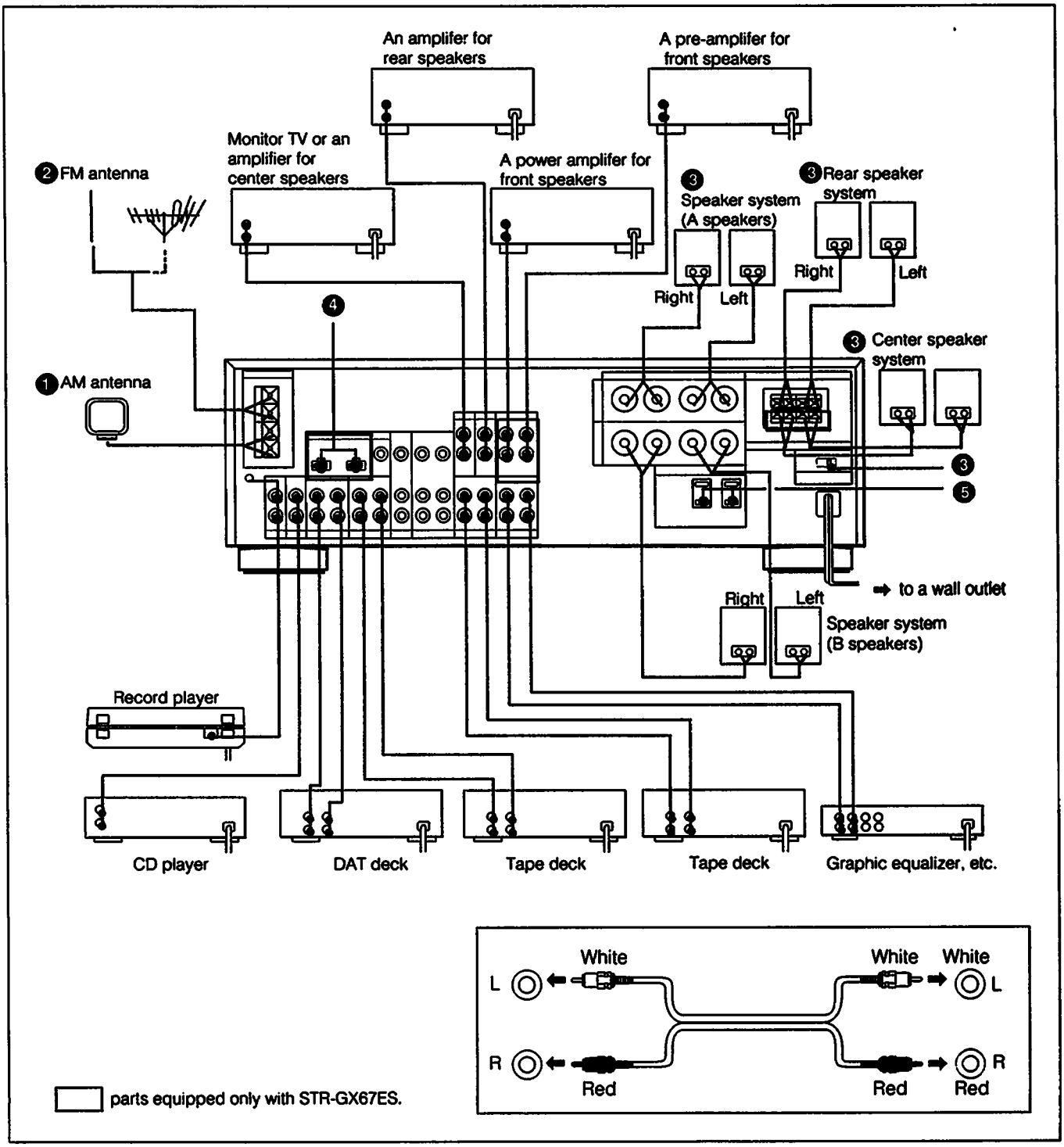
Caution
When the interval is changed, all preset stations which you have memorized will be erased. After changing the interval, be sure to preset the stations again.

Connecting the System

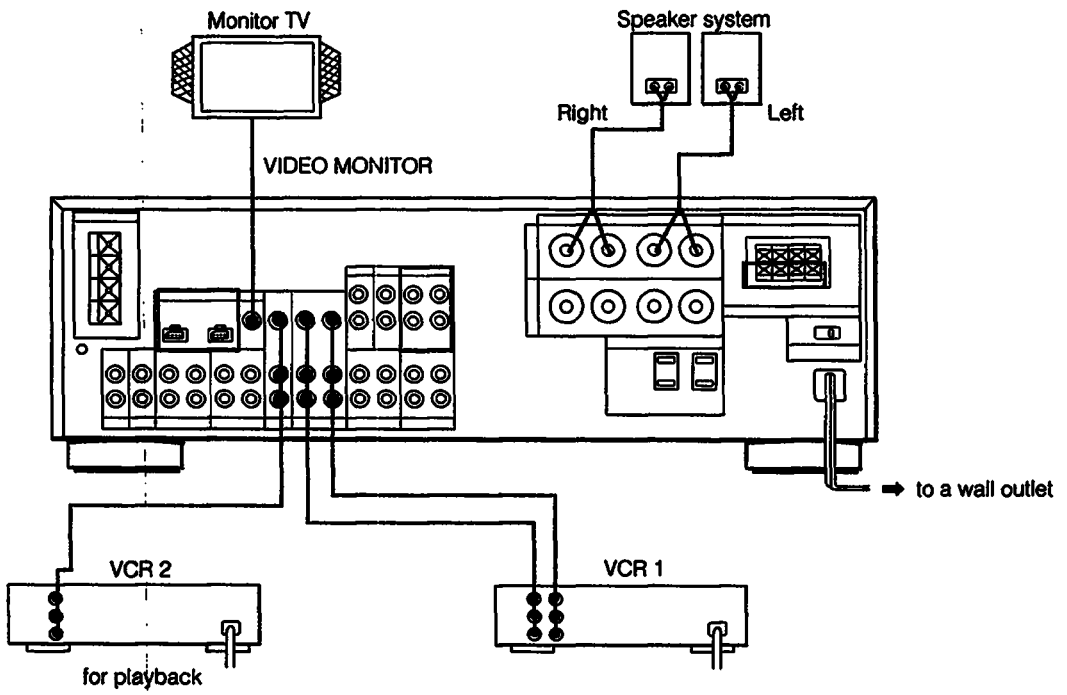
Notes on Connection

- The power cord should be connected last of all, after making sure that the POWER switch is turned off.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Cord plugs and jacks are color coded. The red plugs and jacks are to be connected to the right channel(R) and white ones to the left-channel(L).

Audio Connection Diagram

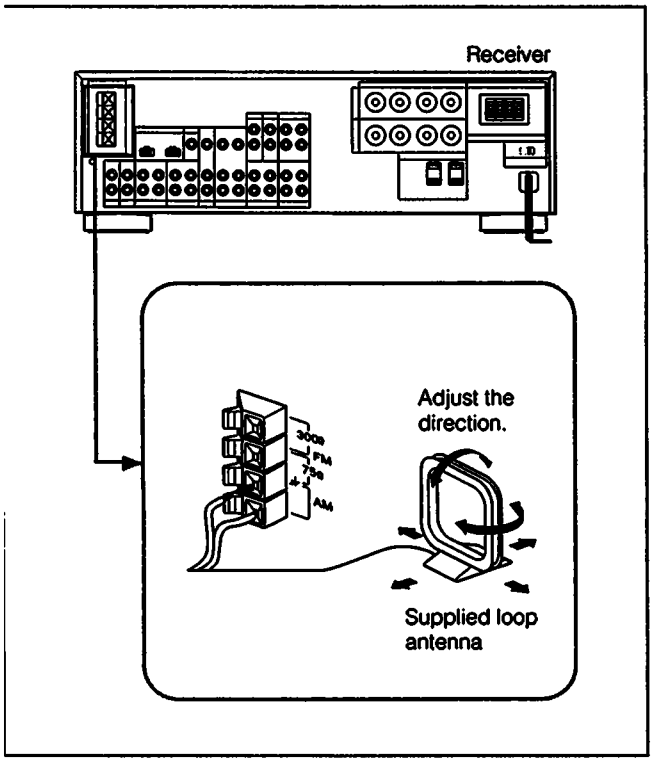


VCR and TV Connection Diagram



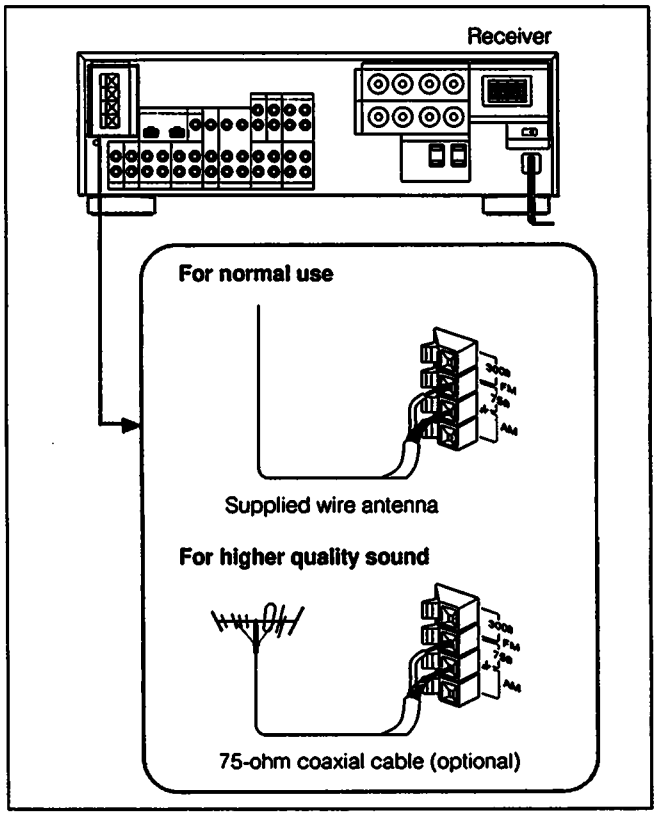
parts equipped only with STR-GX67ES.

❶ Connecting the AM Antenna



For areas with difficult AM reception
In areas with troubled reception, connect a 6 to 15-meter (20 to 50-foot) insulated wire to the AM antenna terminal. Extend this out of doors if possible, keeping the greater portion horizontal.
(There is no need to disconnect the supplied antenna.)

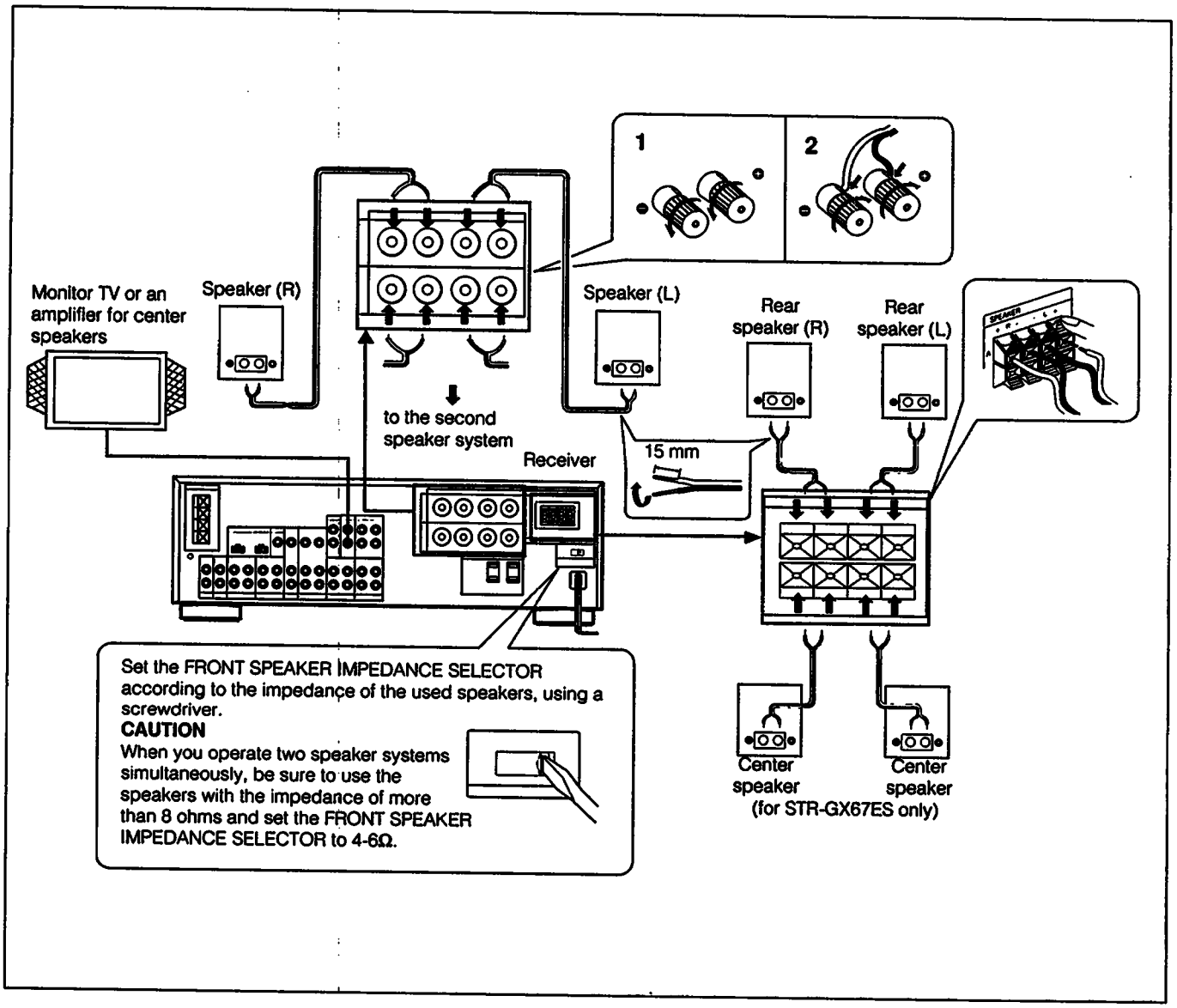
❷ Connecting the FM Antenna



Connecting the Antenna Ground

To prevent hum, connect the ground wire to ANTENNA ground terminal (⏚).
When an outdoor antenna is installed, be sure to connect the ground wire for lightning protection.

❸ Connecting Speaker Systems


1
2
Monitor TV or an amplifier for center speakers
Speaker (R)
Speaker (L)
Rear speaker (R)
Rear speaker (L)
to the second speaker system
Receiver
15 mm
Set the FRONT SPEAKER IMPEDANCE SELECTOR according to the impedance of the used speakers, using a screwdriver.
CAUTION
When you operate two speaker systems simultaneously, be sure to use the speakers with the impedance of more than 8 ohms and set the FRONT SPEAKER IMPEDANCE SELECTOR to 4-6Ω.
Center speaker
Center speaker
(for STR-GX67ES only)

Note

Once the speakers have been connected, move SPEAKERS selector (on the front panel) to A, B or A + B setting.
When using the headphones, set the SPEAKERS selector to OFF.

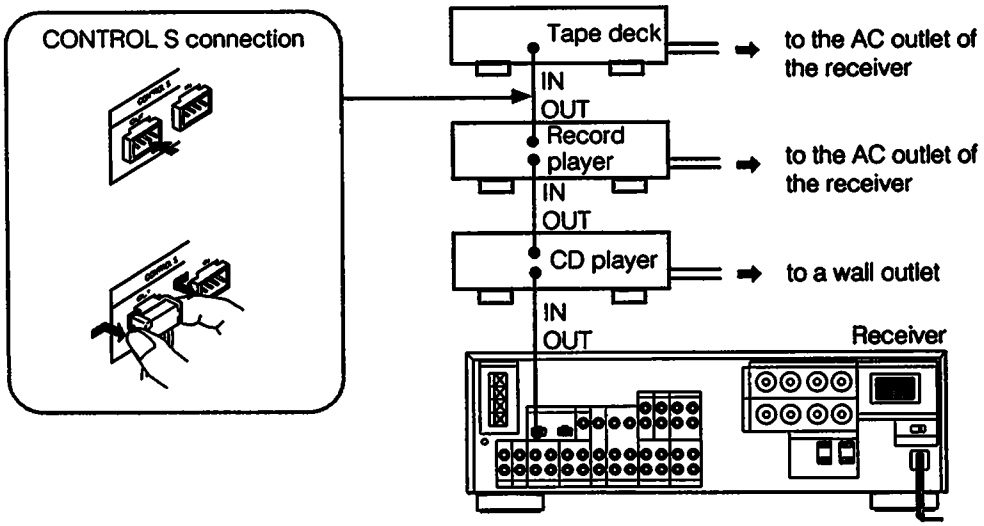
Speaker impedance and power capability (FRONT SPEAKER A or B)

This receiver is designed to work best with speakers having nominal impedance from 4 to 16 ohms at rated 80 watts (STR-GX57ES) or 100 watts (STR-GX67ES) RMS per channel with an 8 ohms load from 20 — 20,000 Hz.

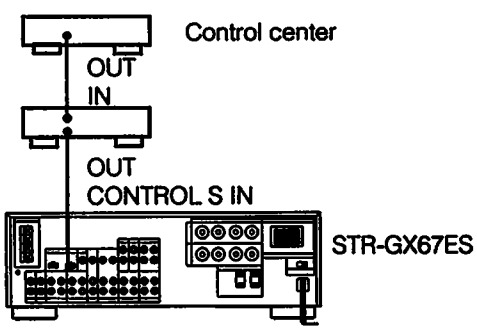
❹ Connecting the Remote Control System (STR-GX67ES only)

To control the equipment connected to the receiver with the remote commander
Connect the CONTROL S OUT connector and the CONTROL S IN connector of each piece of equipment as illustrated.

Connection example

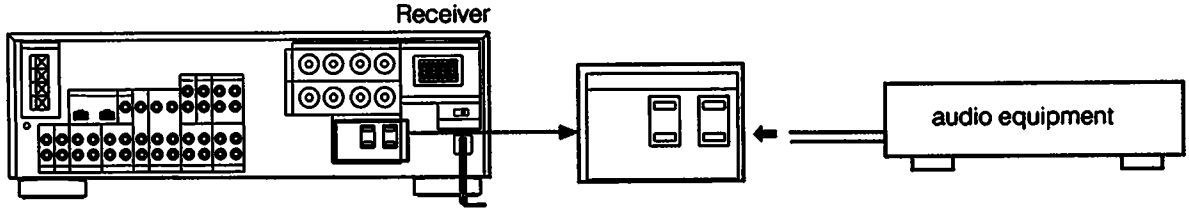


To control this receiver with the remote commander of the other equipment



Note on the CONTROL-S IN connection
To remote control this unit (used as a tuner) through another component, connect the CONTROL-S IN on this unit to the CONTROL-S OUT on a Sony equipment, with a CONTROL-S cable. When this connection is made, only remote commands sent through the CONTROL-S IN connector will be executed. Note that the remote sensor on this unit will not function.

❺ Using AC outlets

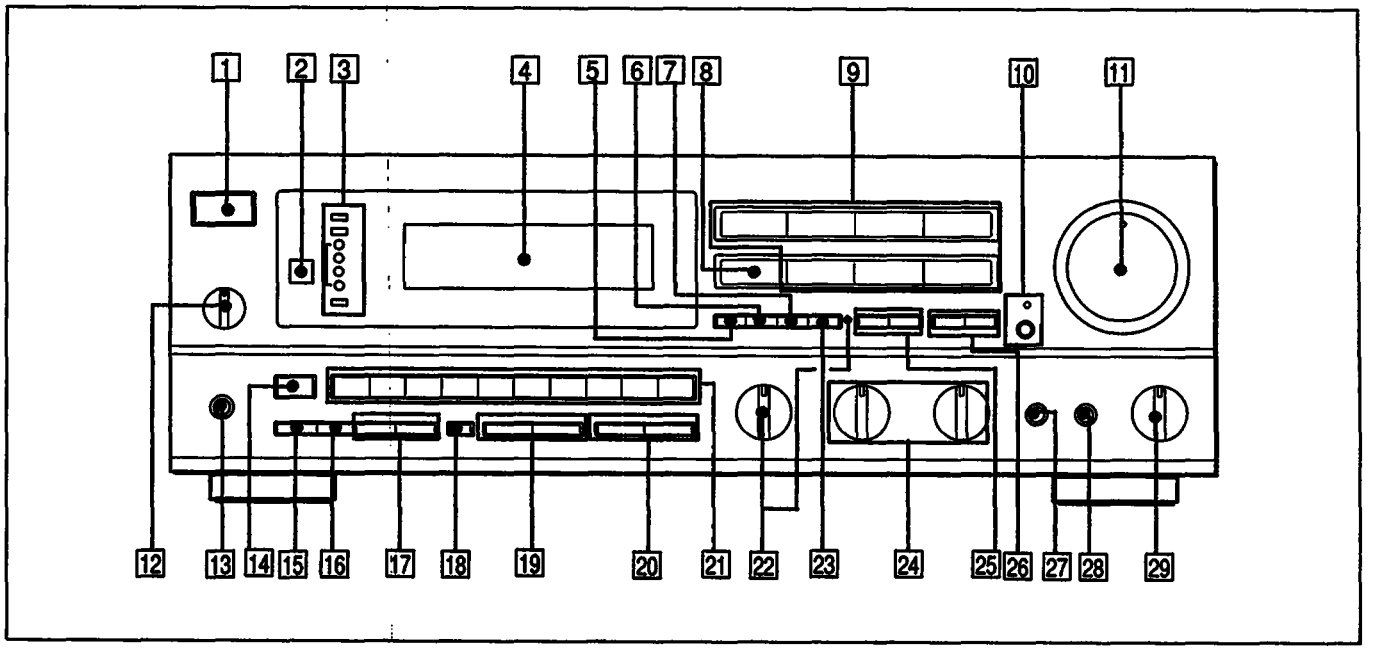


Connect the AC power cord of each piece of equipment to the AC outlet on the receiver so that you can turn the equipment on and off using the receiver's POWER switch.

Caution
Be careful that the total power consumption of each piece of equipment connected to the outlets on the receiver does not exceed 120 watts/1 A Max..
Do not connect electrical home appliances such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

Parts Identification

Front Panel



1 **POWER switch**

2 **Remote control sensor**

3 **Surround, DOLBY PRO LOGIC MODE and TAPE MONITOR indicators**

4 **Display window**

5 **SURROUND ON/OFF button** (page 22 and 23)

6 **SURROUND MODE button** (page 22 and 23)

7 **PRO LOGIC MODE button** (page 22 and 23)

8 **TAPE MONITOR switch** (page 18)

9 **Function selectors**

10 **MUTING button and indicator** (page 14)

11 **ATTENUATOR and indicator** (page 14)

12 **SPEAKERS selector** (page 9)

13 **HEADPHONES jack**

14 **SHIFT button** (page 16 and 17)

15 **FM MODE button** (page 15)

16 **FM TUNE MODE switch** (page 15 and 16)

17 **BAND selectors** (page 15 and 16)

18 **MEMORY button** (page 16)

19 **TUNING –/+ buttons** (page 15 and 16)

20 **PRESET TUNING –/+ buttons** (page 17)

21 **Numeric buttons** (page 16)

22 **INPUT BALANCE control and AUTO INPUT BALANCE indicator** (page 22)

23 **DELAY button** (page 23)

24 **TONE controls** (page 14)

25 **SURROUND LEVEL CENTER –/+ buttons** (page 22 and 23)

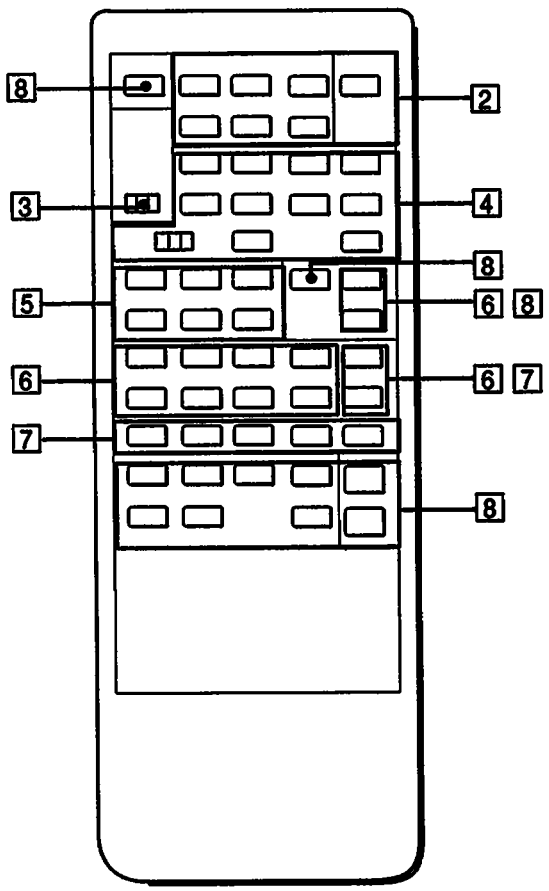
26 **SURROUND LEVEL REAR –/+ buttons** (page 22 and 23)

27 **SOURCE DIRECT button** (page 14)

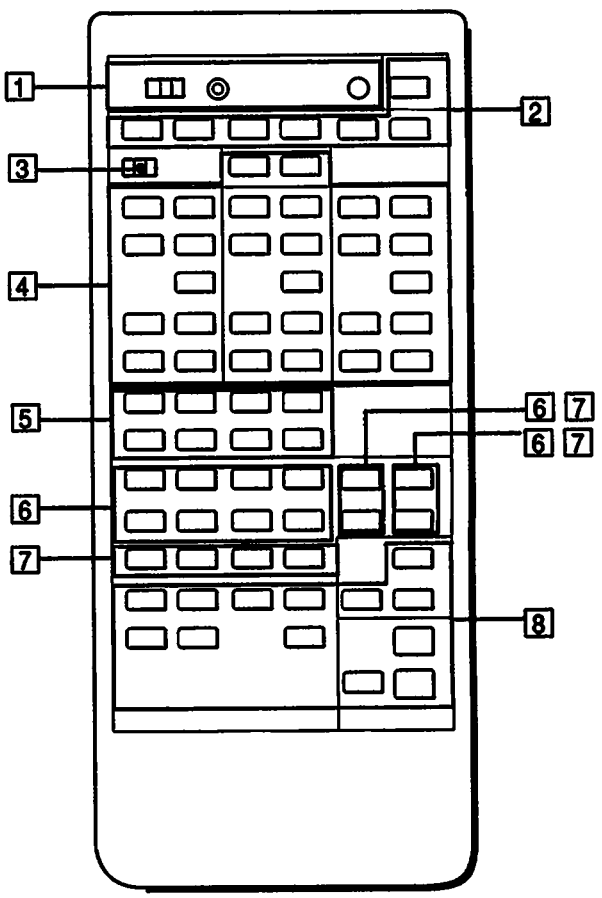
28 **LOUDNESS switch** (page 14)

29 **BALANCE control** (page 14)

Remote Commanders



RM-U213
(supplied with the STR-GX57ES)



RM-P313
(supplied with the STR-GX67ES)

[1] **Program control section (RM-P313 only)**
Mode selector and indicator (page 24)
SONY STD: To control Sony equipment.
USER STD: To control equipment whose remote control functions are stored.
LEARN: To store functions of other remote commanders emitting infrared rays.
PROGRAM CLEAR button: Clears the stored functions.

[2] **Power control section**
SYSTEM OFF button: Turns off the power of the whole system: LDP, VTR, TV and AUDIO.
LDP/VTR/TV/AUDIO POWER buttons: Control the power of each unit.

[3] **MODE button**
1: To select the functions indicated in light gray such as DECK, DAT, CD player and SURROUND mode of the receiver.
2: To select the functions indicated in blue such as VTR, LDP (Laser disc player) and TV.

[4] **TAPE/DAT/VTR control section**
ANT TV/VTR button: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.
VTR CH +/– buttons: Select channel on the VCR.
◄◄/►►: fast winding
■: Stop
◄/►: Play
II: Pause
●: Recording (RM-U213: While pressing ●, press ►)
REC MODE REV/FWD buttons (RM-P313 only):
For reverse recording, press REV and ● together.
For forward recording, press FWD and ● together.
DECK/VTR selector (RM-U213 only)
MODE 1(DECK A,B and DAT): Selects DECK A, B or DAT.
MODE 2(VTR 1, 2 and 3): Selects VTR 1, 2 or 3.
VTR 1: Betamax VCRs
VTR 2: 8mm VCRs
VTR 3: VHS VCRs

[5] **CDP/LDP control section**
D (disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
►: Starts play.
I◄◄/►►I: Locates a desired selection
■: Stops play.
◄◄/►►: Manual search
II: Pause

[6] **TV control section**
TV/VIDEO selector: Selects the program to see : TV or VIDEO.
VOL +/– buttons: Control the TV volume.
CH +/– buttons: Select a preset channel.
Program number (1 to 0) and ENTER buttons: Select the channel.

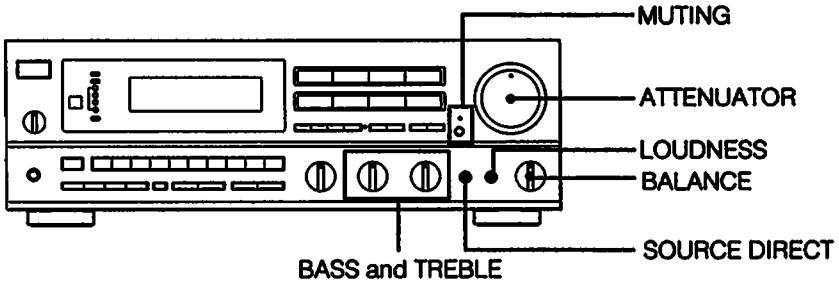
[7] **Sound control section**
SURROUND buttons
ON/OFF: Turns on/off the surround mode.
MODE: Selects the surround mode.
T. (test) TONE: Generates a pink noise signal that is sent in succession to each speaker. (RM-U313 only)
DELAY: Adjust the delay time.
REAR VOL +/– buttons: Control the volume of rear speaker.
CENTER VOL +/– buttons: Control the volume of center speaker.

[8] **Receiver control section**
FUNCTION selectors:
Select an input source of the receiver.
SHIFT button: Selects a memory page.
TUNER PRESET station select buttons: Select a preset station.
MUTING button: Mutes the sound.
MASTER VOL +/– buttons: Control the receiver volume.

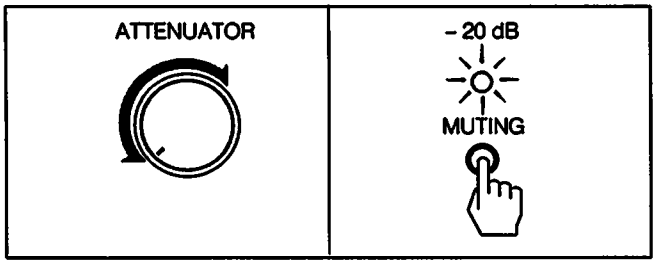
Note:
The ◄/► (play) buttons in [4] and [5] and the SHIFT button and PRESET +/– buttons in [8] can function without pressing one of the FUNCTION buttons in [8], if the CD player is connected to the CD jacks, the tape deck to the TAPE jacks and the video deck to the VIDEO 1 jacks (switch the DECK/VTR selector on the remote commander to VTR 1).

Audio Adjustment

For getting the optimum sound, you can adjust volume and sound quality using the functions below.



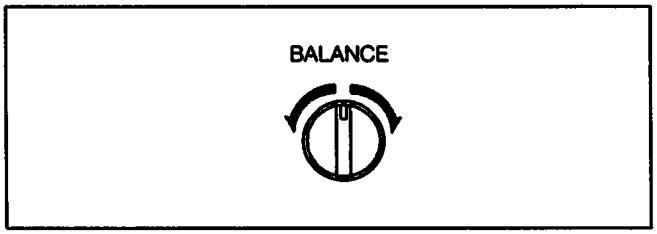
Volume Adjustment



To adjust volume
Turn ATTENUATOR.

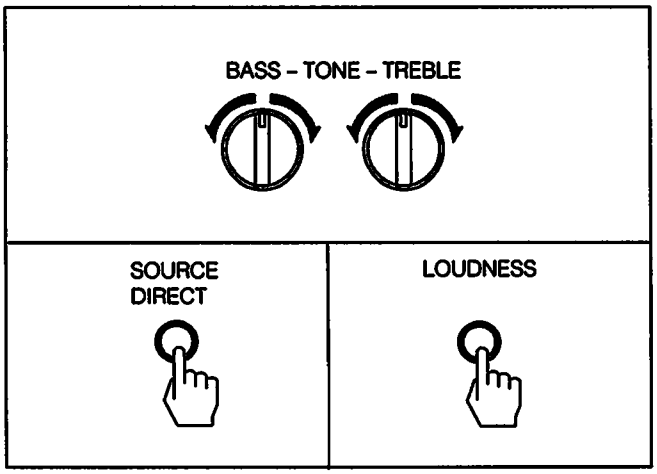
To reduce the sound to a low level temporarily (-20 dB attenuation)
Press MUTING.
Press again to restore the same listening level as before.

Balance Adjustment



To change the relative strength of the right and left speaker output
Adjust BALANCE to correct stereo imaging, when the speaker position is not symmetrical.

Sound Quality Adjustment



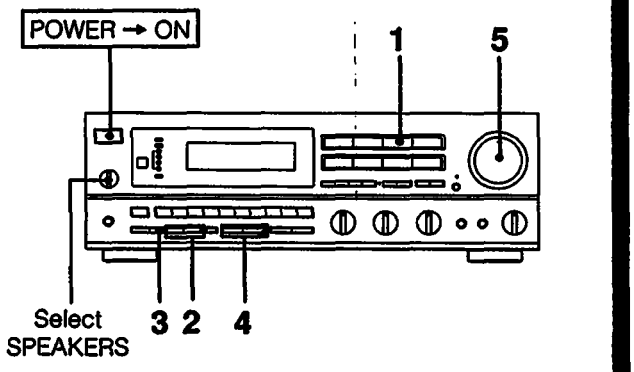
To adjust the tone quality
Adjust BASS or TREBLE for the optimum sound.

To reinforce the bass frequency response
Press LOUDNESS.
The lower the speaker output level is, the more bass frequency sound is emphasized.

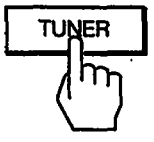
To bypass the tone control and surround circuit
Press SOURCE DIRECT.
BASS and TREBLE tone controls and surround are bypassed.

Receiving FM/AM Broadcasts

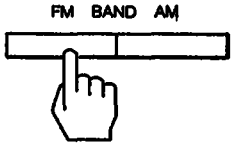
Tuning in an FM Station Automatically-Automatic Tuning



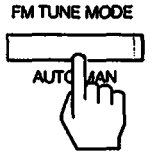
1



2

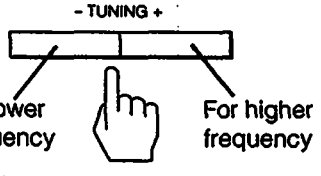


3



The AUTO indicator appears.

4



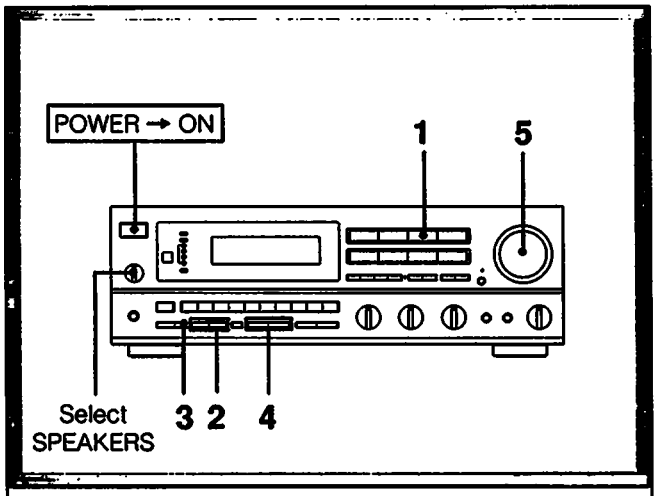
When a station is received, automatic tuning stops.

5

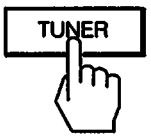
When a station is received, automatic tuning stops.
The signal strength is weak.
To stop sweeping, press FM TUNE MODE again. AUTO indicator disappears and automatic tuning stops.
Then tune in the station as described in "Manual Tuning".

When an FM stereo program is noisy or hard to receive
Press FM MODE. The MONO indicator appears (the sound is heard in monaural, but the reception will be improved).
To return to the stereo mode, press the button again

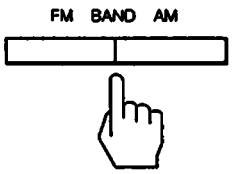
Tuning in an FM/AM Station Manually — Manual Tuning



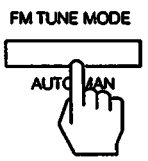
1



2 Select FM or AM.

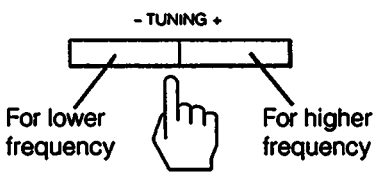


3 (For FM only)



The AUTO indicator disappears.

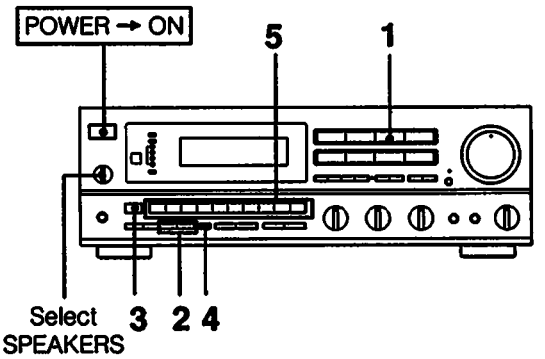
4



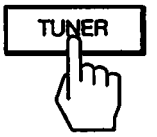
5

Memorizing a Station

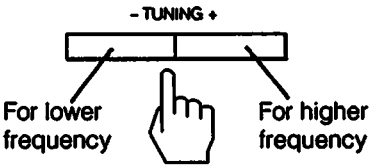
A total of 30 FM/AM stations can be memorized in any desired sequence.



1



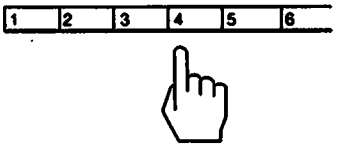
2 Tune in the desired station.



3 Select the memory page (A, B, and C).

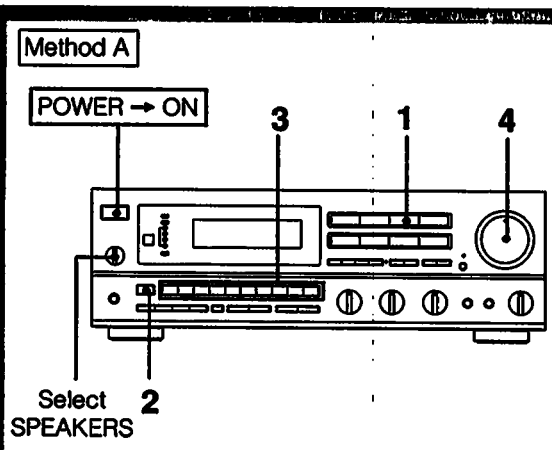
4

5 While the MEMORY indicator is on, press the desired number.

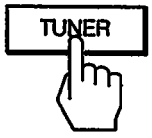


Tuning in a Preset Station

Method A

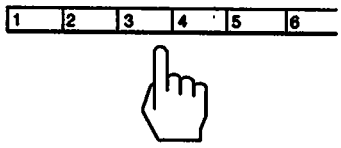


1



2 Select the page.

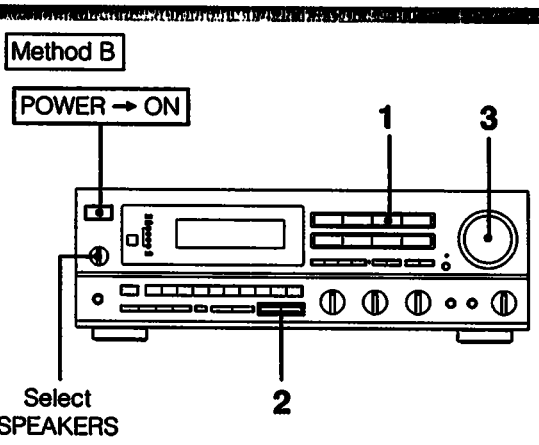
3



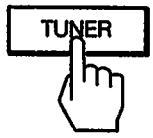
Select the number.

4

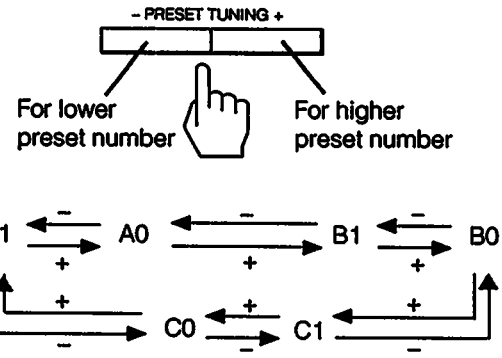
Method B



1



2

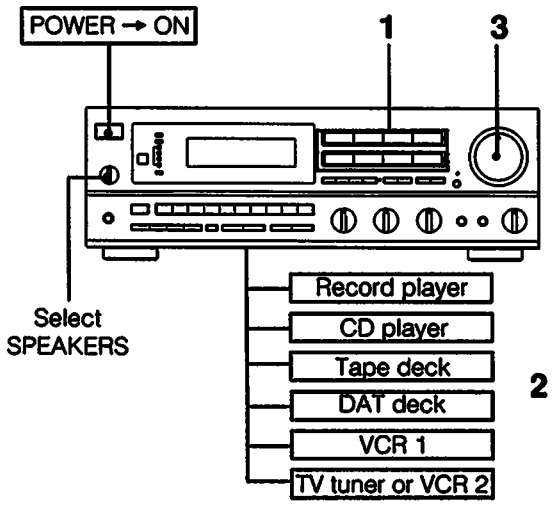


3

Replacing a preset station
Preset another station on the number of the station to be replaced. The previously preset station will be erased.

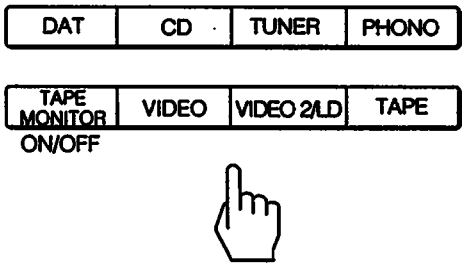
IMPORTANT
The memorized station is maintained for approximately one month even if the power cord is disconnected from the AC power source. If they are erased, store the stations again.

Listening to Program Source other than Broadcasts



1 Select the program source.

	FUNCTION
Record player	PHONO
Compact disc	CD
Video programs	VIDEO 1 or VIDEO 2
Taped programs	TAPE or TAPE MONITOR
DAT programs	DAT



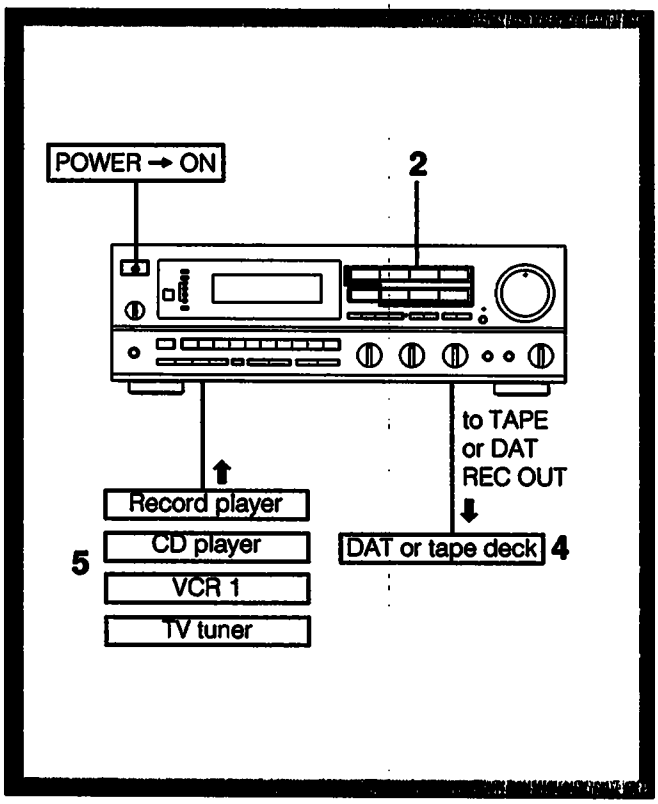
2 Start the program.

3

Note on TAPE MONITOR button
The TAPE MONITOR button has priority over other function selectors. Be sure to release the TAPE MONITOR button except when listening to taped program. Otherwise, the program source selected with the function selector cannot be heard.

Recording on an Audio Tape

Recording



1 Turn on the receiver and the equipment to be used.

2 Select the desired program source.

3 For an FM/AM broadcast, tune in the desired station.

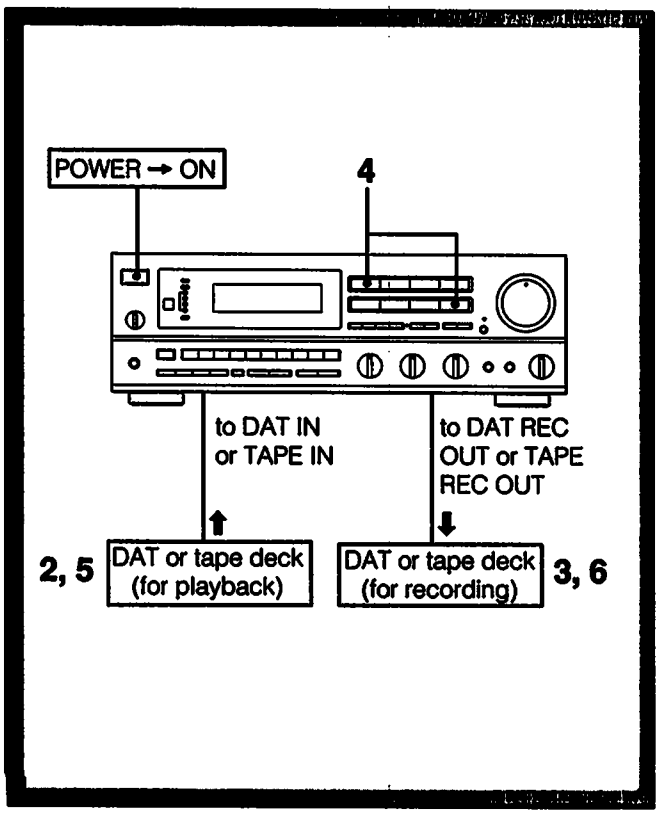
4 Set the DAT or tape deck in the recording mode.

5 Start the desired program source.

To monitor recorded sound while recording
If a tape recorder with three-head system is connected to TAPE MONITOR jacks, recorded sound can be monitored. Select recording tape recorder using the TAPE MONITOR button. The recorded sound is immediately fed back to the amplifier and output to the speakers.

Note on recording
The setting of the volume, BASS, TREBLE, BALANCE and surround effect controls do not have any effect on recording.

Tape Dubbing



1 Turn on the receiver and the equipment to be used.

2 Insert the recorded tape into deck connected to the TAPE jacks or DAT jacks.

3 Insert a blank tape into the DAT deck or the tape deck for recording and adjust the recording level.

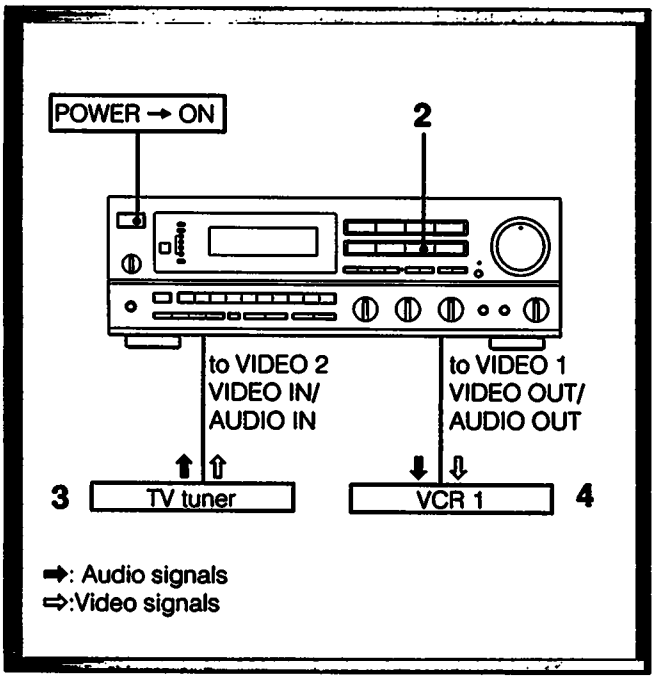
4 Press TAPE or DAT to be played.

5 Start the playback of the tape deck or the DAT deck.

6 Set the DAT deck or the tape deck for recording in the recording mode.

Recording on a VCR

Recording TV Programs



To record the picture and the sound of a TV program, proceed as follows:

1 Turn on the receiver and the equipment to be used.

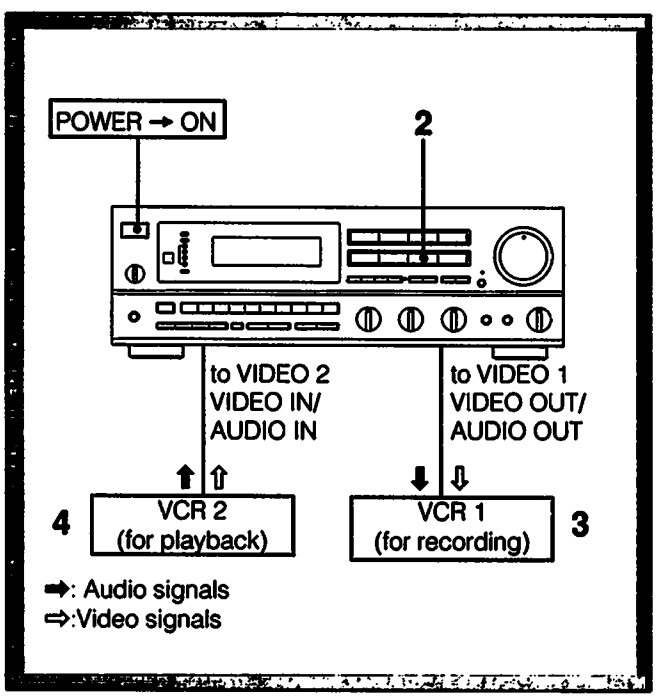
2 Press VIDEO 2/LD.

3 Select the desired program on the TV tuner.

4 Set the VCR 1 to the recording mode.

Note
You cannot record on a VCR connected to VIDEO 2 inputs.

Video Tape Editing



1 Turn on the receiver and the equipment to be used.

2 Press VIDEO 2/LD.

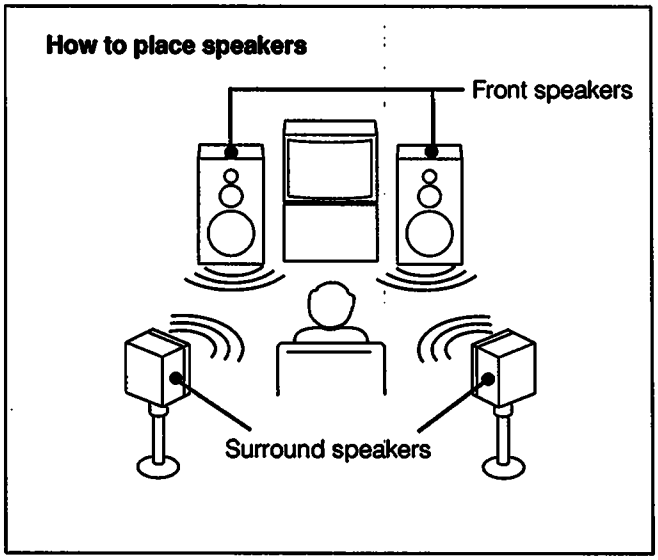
3 Set the VCR 1 to the recording mode.

4 Set the VCR 2 to the playback mode.

Note
You cannot record on a VCR connected to VIDEO 2 inputs.

Obtaining the Surround Effect

Available Types of Effects

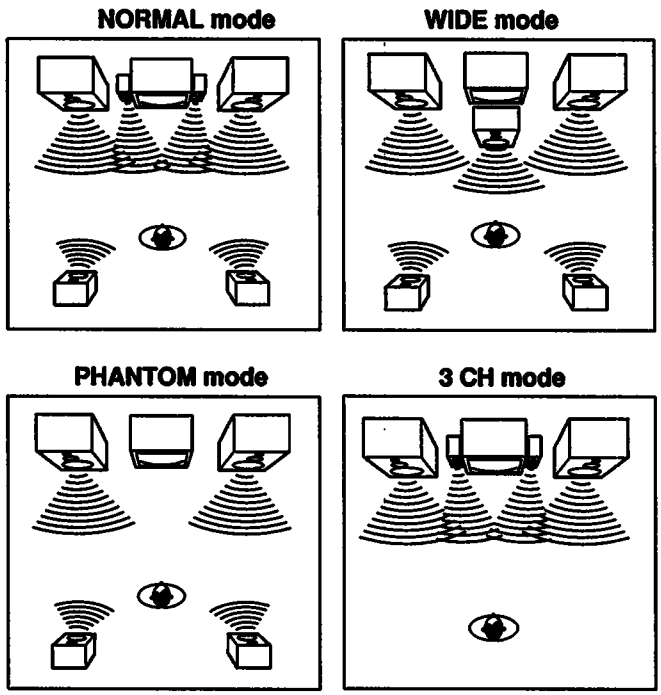


HALL: Provides reverberation effect that is produced in a concert hall.

SIMULATED: Gives a simulated stereo effect to monaural sound.

DOLBY PRO LOGIC: The STR-GX67ES and STR-GX57ES incorporate the Dolby Pro Logic Surround Decoder which has the same functions for playback, such as movie theaters and gives a theater-like experience in your listening room, naturally reproducing the audio sound field.

Placement of Speakers for DOLBY PRO LOGIC Mode



NORMAL mode
When connecting smaller speaker than front speakers, such as that of TV for a center speaker.

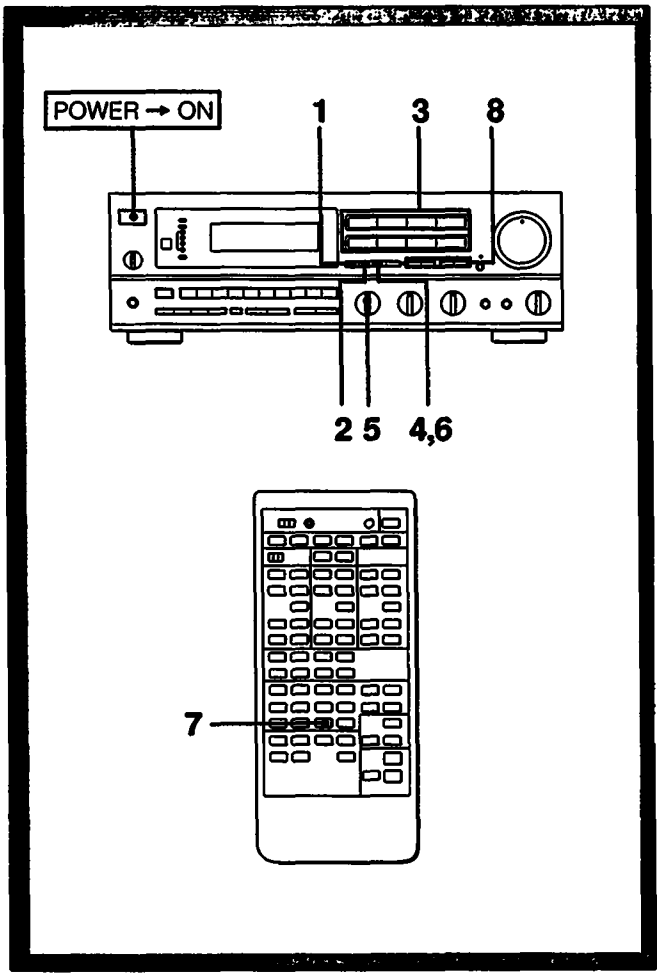
WIDE mode
When connecting the same size of speaker as front speakers for a center speaker.

PHANTOM mode
When connecting only front and rear speakers.

3CH mode
When connecting front speakers and a center speaker.

Center off mode (when no indicator of DOLBY PRO LOGIC mode lights up.)
Set the receiver to this mode when adjusting INPUT BALANCE to obtain the best Dolby surround effect with defeating the sound from a center speaker.

Adjusting the Input Level for Dolby Surround System



1 Press SURROUND ON/OFF to ON.

2 Press SURROUND MODE so that the HALL or SIMULATED indicator disappears from the display.

3 Select a program source with the FUNCTION selector and start playback.

4 Press the PRO LOGIC MODE button so that no indicator of DOLBY PRO LOGIC mode lights up.

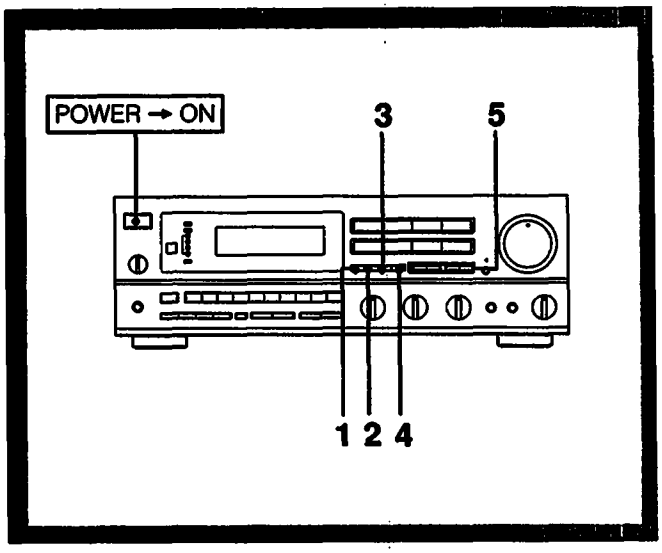
5 When the INPUT BALANCE control is set to the center position and the AUTO INPUT BALANCE indicator lights, the input balance is adjusted automatically, but if you want to adjust it manually, turn the INPUT BALANCE control until the monaural sound, such as a dialogue, heard from the surround speakers is minimized.

6 Select the DOLBY PRO LOGIC MODE according to your speaker system with the PRO LOGIC MODE button.

7 Press the T (Test) TONE button on the remote commander. A test tone (pink noise) signal is sent in succession to each speaker.

8 Adjust the level of rear speakers with the SURROUND LEVEL REAR +/– buttons and the center speaker volume with the SURROUND LEVEL CENTER +/– buttons, so that sound from each speaker is heard in the same volume level at the listening position. (When adjusting the VOLUME control on the receiver, all speakers is adjusted simultaneously.)

Listening with Surround Effect



1 Press SURROUND ON/OFF, so that SURROUND ON appears in the display window.

2 Press SURROUND MODE and select the desired mode, HALL, SIMULATED, DOLBY.

3 If you select DOLBY on step 2, press PRO LOGIC MODE button, and select the desired mode.

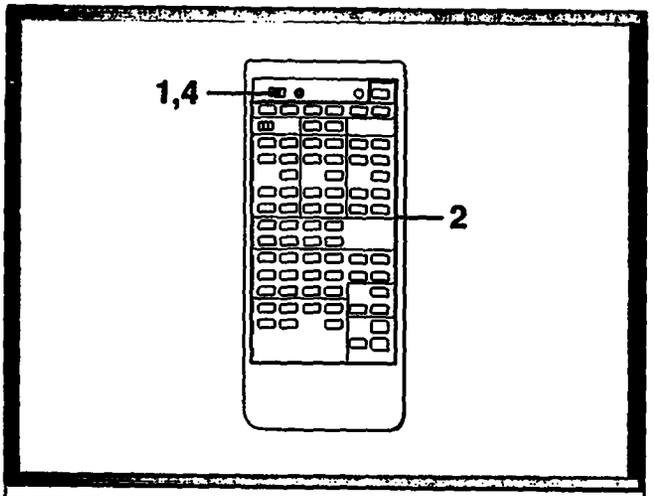
4 Adjust delay time by pressing the DELAY button.

5 Adjust the surround speaker level by pressing the SURROUND LEVEL CENTER or REAR –/+ buttons.

To turn off the surround effect
Press SURROUND ON/OFF again.
The normal sound without surround effect will resume.

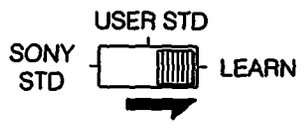
How to Use the Learning Function (STR-GX67ES only)

Programming Signals of Other Audio/Video Equipment with Programmable System Commander RM-P313



The RM-P313 learns various functions of other remote commanders emitting infrared rays and allows you to control most of audio and video equipment from a distance.

1 Set the mode selector to LEARN.

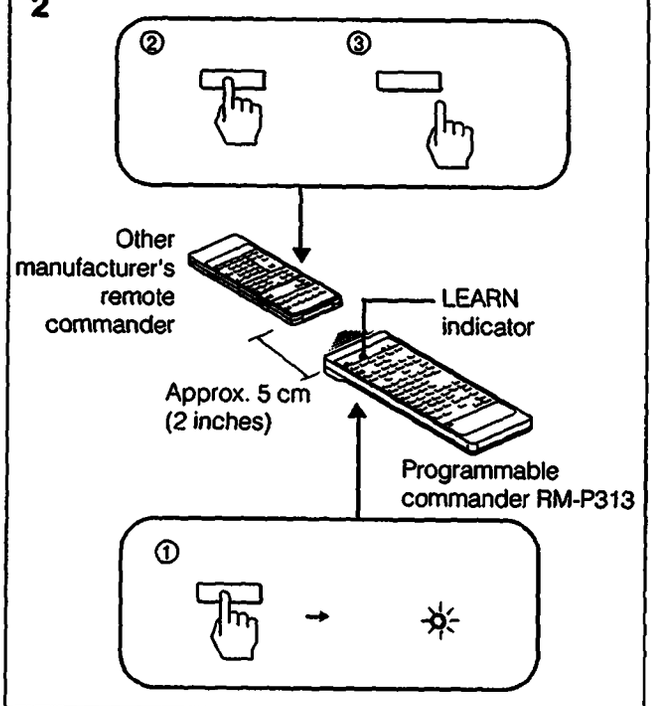


2 Program a signal.

① Press and hold the button which shall "learn" the remote-control signal until the LEARN indicator lights up.

② Press and hold the button of other manufacturer's remote commander whose signal is to be learned.

③ Remove your finger(s) from the button(s) after the LEARN indicator goes off.



The two remote commanders must:

- face straight each other.
- be placed at a distance of approx. 5 cm (2 inches).
- not be moved during programming operation.

3 Repeat operation for each button to be programmed.

4 Set the mode selector to USER STD or SONY STD.

After programming

Be sure to test if the equipment really works with the programmed signals.

Number of signals that the commander can learn

It depends on the format of the signal. If you program signals of Sony equipment, approximately 50 - 60 signals can be programmed.

If the LEARN indicator flashes or does not go out in step 2-②, ③.
The memory capacity has become full. This occurs when other signals stronger than the remote-control signals have been stored because the signals were programmed in a noisy environment or the remote commanders were placed too far apart from each other.
→ Clear all the signals following the procedure on the right and program again from the beginning under the proper conditions.

Notes on programming

- Remote-control signals of equipment of manufacturers other than Sony can be programmed only when they are compatible with the infrared wireless remote control system. Since the programmable commander can "learn" only the signals output from another remote commander, it cannot control equipment that does not use a remote commander. Also, note that there are some special remote-control signals that cannot be programmed.
- Do not attempt to use the programmable commander with an air conditioner or other household appliances.

To program a new signal onto a previously programmed button

Follow the programming procedure.
The previously programmed signal is cleared and replaced by the new signal.

To clear all programmed signals

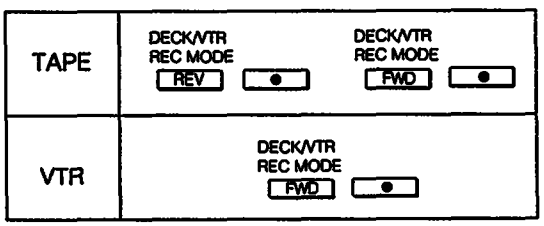
1 Set the mode selector to LEARN.
2 Press and hold any button of the programmable area until the LEARN indicator lights up.
3 Press PROGRAM CLEAR until the LEARN indicator flashes and goes off.

Note

It is not possible to clear the programmed content of just one button.

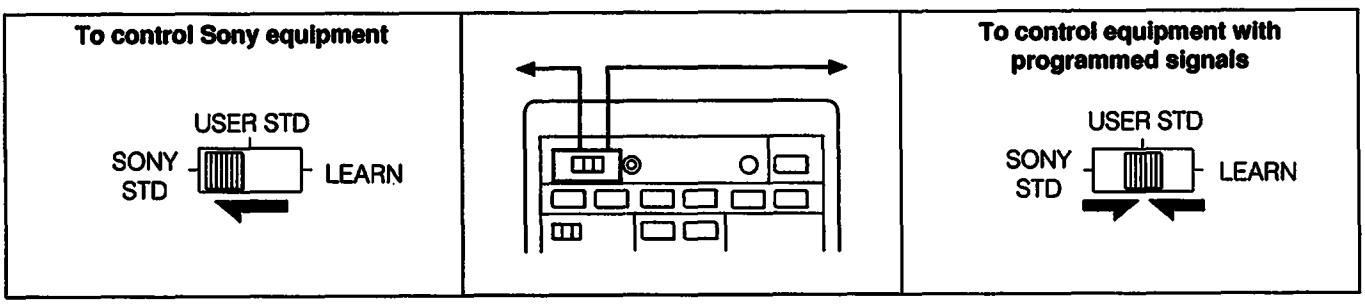
To program a signal onto the ● REC button in the TAPE or VTR section

It is not possible to operate any equipment with only the ● REC button. To program a signal under the ● REC button, press and hold the following buttons at the same time in step 2- ①.



Controlling Equipment

By switching the mode selector as shown below, a single button alternately controls Sony equipment and another manufacturer equipment.



When Sony equipment cannot be remote-controlled
Program the signal in the same way as for equipment from other manufacturers. In this case, even with Sony equipment, set the mode selector to USER STD.

Notes on Battery
If the LEARN indicator does not light when a button is pressed, the batteries are almost exhausted.
When the batteries are exhausted, the remote commander can no longer operate the unit or programming becomes impossible.
If this happens, replace both batteries with new ones. We recommend the use of alkaline batteries for prolonged use.
If you leave the batteries out for a long time when replacing, the program will disappear.

If no signal has been programmed
The programmable commander can control Sony equipment even when the mode selector is set to USER STD.

If the equipment works incorrectly
Press RESET.
The programmed contents of the buttons are not cleared by pressing RESET.

Troubleshooting

Before proceeding through the check list below, examine the connections and the procedures outlined the manual. Should any problem persist after you have checked the following items, consult your nearest Sony dealer.

	Problem	Cause	Remedy
Amplifier	Sound is not heard.	The TAPE MONITOR jacks are not in use and the TAPE MONITOR button is pressed to ON.	Press the TAPE MONITOR button to set to OFF.
		The ADAPTOR jacks or the FRONT jacks are not in use and the short plugs are not inserted.	Insert the short plugs to the ADAPTOR jacks or the FRONT jacks.
		The PRE OUT and POWER IN jacks are not in use and the short plugs are not inserted. (For STR-GX67ES only)	Insert the short plugs to the PRE OUT and POWER IN jacks.
		The speaker or program source equipment is not connected correctly.	Connect the equipment correctly. (See pages 6-7.)
		The correct speakers are not selected with SPEAKERS selector.	Set the SPEAKERS selector correctly.
		The correct function selector is not pressed.	Press the correct function selector.
		The volume is set to minimum.	Increase the volume.
	Surround effect cannot be obtained. Surround effect cannot be adjusted.	The SURROUND ON/OFF button is set to OFF.	Press the SURROUND ON/OFF button to set to ON.
		The SOURCE DIRECT button is set on.	Set the SOURCE DIRECT button off.
	One channel does not transmit audio, or the volume from the left and right speakers is unbalanced.	The BALANCE control is not set appropriately.	Adjust the BALANCE control.
		The speaker or program source is not connected correctly.	Connect the equipment correctly. (See pages 6-7.)
	There is an abrupt loss of sound from one or both of the speakers, and the PROTECTOR indicator flickers in the display window.	A short-circuit problem activates the protective circuit.	Turn off the receiver, eliminate the short-circuit problem and turn on the power again. If there is no short-circuit, consult your nearest Sony dealer.
		The SPEAKER IMPEDANCE SELECTOR on the rear is not set correctly.	Set the SPEAKER IMPEDANCE SELECTOR correctly.
	Sound transmitted from the speakers is reversed.	The speakers are not connected correctly.	Connect the right speaker to the R SPEAKER terminals and the left speaker to the L SPEAKER terminals.
	There is lack of bass sound or the instrument position is obscure.	The +/– connection of the speaker is reversed.	Connect the speaker with the correct phase.

	Problem	Cause	Remedy
Amplifier	Severe hum or noise is heard.	The connecting cords are not of shielded type.	Use shielded type cords.
		A transformer, motor, TV or fluorescent light affects the connecting cord.	Place the connecting cords in a location away from a transformer or motor, and at least 3 meters (10 feet) from a TV set or a fluorescent light.
		The audio components are too close to a TV set.	If both are used at the same time, separate the TV from the audio components.
		The receiver is not grounded.	Connect the ground wire to the antenna ground terminal.
		The connections are loose.	Secure the connections.
		The plugs and jacks are dirty.	Wipe the plugs and jacks with a cloth lightly dampened with alcohol.
Broadcast program	STEREO indicator flickers or does not appear when receiving stereo programs.	A very weak FM station or a noisy FM program is received.	Adjust the antenna or connect an external FM antenna.
			Press the FM MODE button to disengage the stereo mode.
	The desired station cannot be found during Automatic Tuning.	The signal strength is too weak for Automatic Tuning.	Adjust the antenna.
			Tune in the station with the Manual Tuning system. (See page 16.)
	Preset stations cannot be tuned in.	The stations have not been memorized.	Memorize the stations. (See page 16.)
	AM station cannot be tuned in.	The AM tuning interval is set incorrectly.	Change the tuning interval according to the AM frequency allocation system of your country. (See page 5.)
Video program	Picture does not appear.	VCR, TV tuner or TV connection is not correct.	Connect the equipment correctly. (See page 7.)
		The TV is not turned on.	Turn the TV on.
Remote Commander	The remote commander does not operate.	The batteries are exhausted.	Replace the batteries with new ones.
		There is any object between the unit and the commander head.	Remove the object.

Specifications

Audio Power Specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 100 watts (STR-GX67ES) or 80 watts (STR-GX57ES) per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milliwatts to rated output.

With 4-ohm load, both channels driven, from 20 - 20,000 Hz, rated 100 watts (STR-GX67ES) or 80 watts (STR-GX57ES) per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milliwatts to rated output.

Other Specifications

Amplifier section

Dynamic power output

STR-GX57ES

115 watts + 115 watts (8 ohms, at 1 kHz IHF)
170 watts + 170 watts (4 ohms, at 1 kHz IHF)
220 watts + 220 watts (2 ohms, at 1 kHz IHF)

STR-GX67ES

155 watts + 155 watts (8 ohms, at 1 kHz IHF)
240 watts + 240 watts (4 ohms, at 1 kHz IHF)
275 watts + 275 watts (2 ohms, at 1 kHz IHF)

Power output of center amplifier (STR-GX67ES only)

50 watts:
25 watts + 25 watts (8 ohms at 1 kHz)

Power output of rear amplifier

25 watts + 25 watts (8 ohms at 1 kHz)

Harmonic distortion

Less than 0.08% at rated output

Frequency response

PHONO: RIAA equalization curve ±0.5 dB
CD, DAT
TAPE
VIDEO 1, 2 (AUDIO)
TAPE MONITOR
] 5 Hz - 50 kHz $^{+0}_{-1}$ dB

Residual noise: Less than 70 µV (8 ohms, network A)

Damping factor: 50 (8 ohms, 1 kHz)

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	2.5 mV	50 kilohms	87 dB 79 dB* (A, 2.5 mV)
CD, VIDEO (1), 2 TAPE, DAT TAPE MONITOR	150 mV	50 kilohms	105 dB 86 dB* (A, 150 mV)

* '78 IHF

Outputs

VIDEO (1) AUDIO OUT
REC OUT
Voltage 150 mV
Impedance 10 kiloohms
SPEAKER A, B
Accepts speakers of 4 — 16 ohms.
HEADPHONES
Accepts low and high impedance headphones.
CENTER OUT, REAR OUT
2.5 V, 1 kilohm
PRE OUT
1 V, 1kilohm

Video inputs: VIDEO 1, 2: 1 Vp-p, 75 ohms

Video outputs: VIDEO 1, MONITOR: 1 Vp-p, 75 ohms

Tone controls: BASS: ±8 dB at 100 Hz
TREBLE: ±8 dB at 10 kHz

Muting: -20 dB

FM/AM tuner section

	FM tuner section	AM tuner section
Tuning	87.5 — 108 MHz	530 — 1,710 kHz (with the AM tuning interval set at 10 kHz) 531 — 1,710 kHz (with the AM tuning interval set at 9 kHz)
Antenna	300 ohms,balanced 75 ohms, unbalanced	External antenna terminal, loop antenna
Intermediate frequency	10.7 MHz	450 kHz
Sensitivity at 50 dB quieting	18.3 dBf, 4.5 µV (mono) 38.3 dBf, 45 µV (stereo)	—
Usable sensitivity	11.2 dBf, 2 µV (IHF)	Loop antenna: 50 dB/m (at 1,000 kHz) External antenna: 100µV (at 1,000 kHz)
Signal-to-noise ratio	82 dB (mono) 76 dB (stereo)	54 dB (at 50 mV/m)
Harmonic distortion	0.1% (mono), 0.2% (stereo) at 1 kHz	0.3% (at 50 mV/m, 400 Hz)
Selectivity	60 dB at 400 kHz	40 dB at 10 kHz 35 dB at 9 kHz
Separation	45 dB at 1 kHz	
Frequency response	30 Hz — 15 kHz $^{+0.5}_{-1.5}$ dB	
IM distortion	0.1% (mono) 0.2% (stereo)	
Capture ratio	1.2 dB	
AM suppression ratio	54 dB	
Image response ratio	80 dB	
IF response ratio	90 dB	
Spurious response ratio	100 dB	
RF Intermodulation	65 dB (800 kHz)	
Auto tuning threshold	30 dBf	

General

System
Tuner section: PLL quartz-locked digital synthesizer system
Preamplifier section: low-noise NF type equalizer amp
Power amplifier section: pure-complementary SEPP

Power requirements
120 V AC, 60 Hz

Power consumption

	USA model	Canadian model
STR-GX67ES	250 watts	540 VA
STR-GX57ES	190 watts	420 VA

AC outlets
Two switched (total 120 W/1 A)

Dimensions
Approx. 430 x 150 x 375 mm (w/h/d)
(17 x 5 $^{7}/_{8}$ x 14 $^{3}/_{4}$ inches) including projecting parts and controls

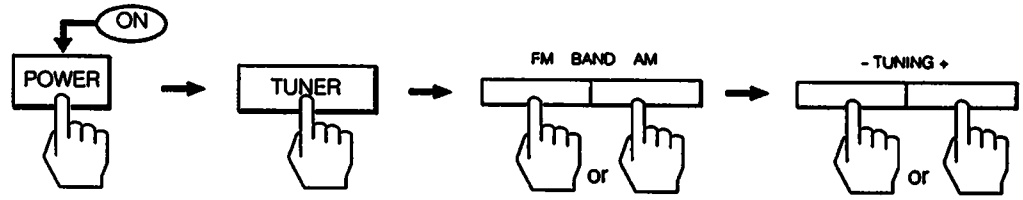
Weight
STR-GX67ES: Approx. 13.5 kg (29 lb 13 oz)
STR-GX57ES: Approx. 12.5 kg (27 lb 9 oz)

Accessories supplied
FM wire antenna (1)
AM loop antenna (1)
Remote Commander (1)
RM-P313 (STR-GX67ES)
RM-U213 (STR-GX57ES)
Sony batteries SUM-3(NS) (for the remote commander) (2)

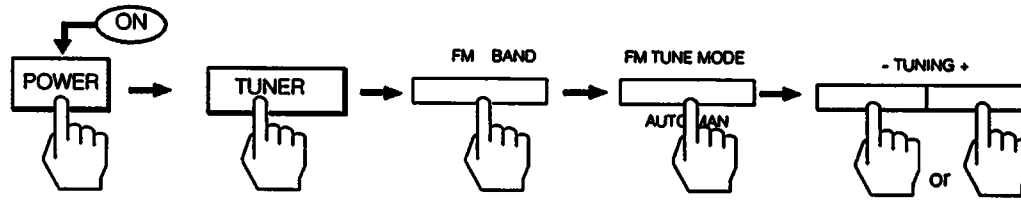
Design and specifications subject to change without notice.

Quick Reference

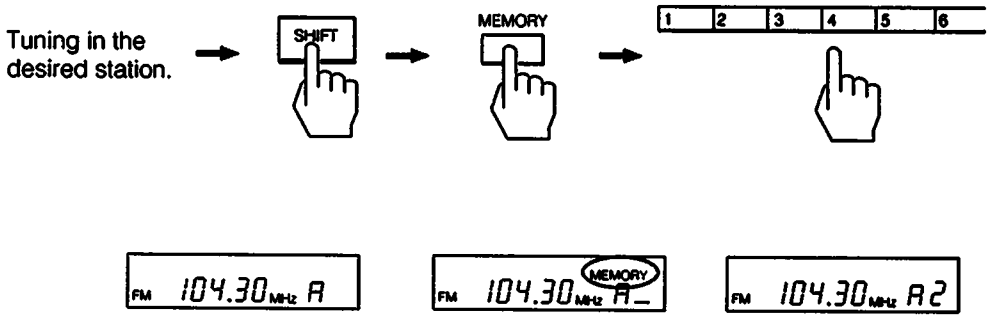
Tuning in an FM/AM station manually



Tuning in an FM station automatically



Memorizing a station



Tuning in a preset station